Scope of K050 Listing – Questions from Hawaii Attorney General's Office

Mr. Elliot,

My name is Dana Viola and I am a deputy attorney general with the State of Hawaii. I was given your name by Ms. Cheryl Nelson, from EPA Region 9, when we asked her to put us in contact with EPA's expert regarding listed hazardous wastes.

The State of Hawaii Department of Health (DOH) has issued an enforcement action against Chevron Refinery for violations related to the management of K050 hazardous waste. I have summarized the facts and issues as follows:

Facts:
During an inspection of a recycling facility, DOH observed a petroleum refinery heat exchanger bundle (HEB) covered with scale and debris. DOH discovered that Chevron Refinery (Chevron) owned the HEB in question and had failed to properly clean it before shipping it off for recycling. Chevron had taken the HEB off-line with the intent to put it back into service. However, Chevron did not reuse the HEB, so it was out of service for approximately 4 years before Chevron finally decided to recycle it.

Pursuant to DOH's direction, Chevron had the encrusted matter sampled and analyzed for hazardous constituents and the results indicated that the waste contained nickel and cadmium. DOH requested that Chevron conduct this testing because Chevron had argued that the encrusted matter was dirt, coral, and seawater that had accumulated on the HEB while it was stored at the refinery.

DOH determined that the scale and debris constituted K050 hazardous waste and instructed Chevron to dispose of the hazardous waste accordingly.

DOH's Enforcement Action:
[redacted]

Chevron's Argument:
Chevron contends that the scale and debris on the HEB do not constitute K050 hazardous waste because the HEB was never cleaned, so the scale and debris is not "heat exchanger bundle *cleaning sludge.*"

Chevron reasoned that the original basis for the K050 listing was to further manage the sole hazardous constituent, hexavalent chromium, in heat exchanger sludge as derived from the chromate-based corrosion inhibitors used in cooling water. Chevron contends that the scale and debris were never in contact with the cooling water because, for the system at issue, the cooling water flows through the interior of the tubes of the HEB while the process material, which Chevron is claiming is the catalyst, flows on the exterior side of the tubes.

Chevron argues that the scale and debris on the exterior of the HEB would only come into contact with the sludge derived from the cooling water when the HEB is cleaned and the wastes are mixed. Thus, the K050 hazardous waste listing specifies "heat exchanger bundle cleaning sludge" because only upon mixing through the cleaning process would all the scale and debris derived from the heat exchanger process be considered hazardous waste.

DOH's Interpretation:
DOH explained to Chevron that there is no "general exclusion for sludge from HEBs where chromium-based corrosion inhibitors are not present." United States Environmental Protection Agency, Letter Regarding "Request for Clarification of K050 Waste Code Applicability," August 24, 2000. Therefore, the fact that the scale and debris on the exterior of the tube would never come into contact with the cooling water would not exclude the scale and debris from the K050 listing.

Regarding the mixing of the wastes, DOH informed Chevron that the cleaning process does not dictate when K050 waste is generated. DOH provided Chevron with Faxback 11903 that explains

hazardous waste which is generated . . . in a manufacturing process unit . . . may remain in the unit for up to ninety days after the unit has been shut down, and may then be stored for an additional ninety days in a tank, container, drip pad, or containment building . . .without a RCRA storage permit.

Because this letter responded to a question regarding the applicability of 40 CFR 261.4 to HEBs left in crude oil topping units if the units discontinue operations longer than 90 days, DOH could presume that, although the letter does not specifically state when K050 is generated as hazardous waste, K050 was generated before cleaning the HEB because hazardous waste storage requirements applied to this particular waste without any reference to when the HEB would be cleaned.

EPA Region 9 provided DOH with a letter dismissing Chevron's interpretation that only sludge cleaned from an HEB would constitute K050 hazardous waste. EPA stated that such an interpretation would be contrary to EPA's original intent for listing the sludge because facilities could avoid the listing by simply refraining from cleaning the bundles, thus allowing the potential release of hexavalent chromium into the environment.

Chevron countered this letter by arguing that because the exterior of the tubes was never in contact with the cooling water, the scale and debris at issue would not contain hexavalent chromium and therefore would not leach hexavalent chromium into the environment. Chevron argues further that the HEBs would still be properly managed because Chevron had conducted a test for heavy metals and had determined that the scale and debris was non-hazardous.